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NEWS 1		Web Page for STN Seminar Schedule - N. America
NEWS 2	AUG 06	CAS REGISTRY enhanced with new experimental property tags
NEWS 3	AUG 06	FSTA enhanced with new thesaurus edition
NEWS 4	AUG 13	CA/CAplus enhanced with additional kind codes for granted patents
NEWS 5	AUG 20	CA/CAplus enhanced with CAS indexing in pre-1907 records
NEWS 6	AUG 27	Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB
NEWS 7	AUG 27	USPATOLD now available on STN
NEWS 8	AUG 28	CAS REGISTRY enhanced with additional experimental spectral property data
NEWS 9	SEP 07	STN AnaVist, Version 2.0, now available with Derwent World Patents Index
NEWS 10	SEP 13	FORIS renamed to SOFIS
NEWS 11	SEP 13	INPADOCDB enhanced with monthly SDI frequency
NEWS 12	SEP 17	CA/CAplus enhanced with printed CA page images from 1967-1998
NEWS 13	SEP 17	CAplus coverage extended to include traditional medicine patents
NEWS 14	SEP 24	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS 15	OCT 02	CA/CAplus enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS 16	OCT 19	BEILSTEIN updated with new compounds
NEWS 17	NOV 15	Derwent Indian patent publication number format enhanced
NEWS 18	NOV 19	WPIX enhanced with XML display format
NEWS 19	NOV 30	ICSD reloaded with enhancements
NEWS 20	DEC 04	LINPADOCDB now available on STN
NEWS 21	DEC 14	BEILSTEIN pricing structure to change
NEWS 22	DEC 17	USPATOLD added to additional database clusters
NEWS 23	DEC 17	IMSDRUGCONF removed from database clusters and STN
NEWS 24	DEC 17	DGENE now includes more than 10 million sequences
NEWS 25	DEC 17	TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment
NEWS 26	DEC 17	MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
NEWS 27	DEC 17	CA/CAplus enhanced with new custom IPC display formats
NEWS 28	DEC 17	STN Viewer enhanced with full-text patent content from USPATOLD
NEWS 29	JAN 02	STN pricing information for 2008 now available
NEWS 30	JAN 16	CAS patent coverage enhanced to include exemplified prophetic substances
NEWS 31	JAN 28	USPATFULL, USPAT2, and USPATOLD enhanced with new custom IPC display formats
NEWS 32	JAN 28	MARPAT searching enhanced

NEWS 33 JAN 28 USGENE now provides USPTO sequence data within 3 days of publication
NEWS 34 JAN 28 TOXCENTER enhanced with reloaded MEDLINE segment
NEWS 35 JAN 28 MEDLINE and LMEDLINE reloaded with enhancements

NEWS EXPRESS 19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.

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=> fil caplus

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FILE COVERS 1907 - 4 Feb 2008 VOL 148 ISS 6
FILE LAST UPDATED: 3 Feb 2008 (20080203/ED)

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http://www.cas.org/infopolicy.html

=> s lipase and (108-30-5/RN)
51336 LIPASE
8931 LIPASES
52719 LIPASE
(LIPASE OR LIPASES)

```
         11365 108-30-5
          3276 108-30-5D
          8208 108-30-5/RN
                 (108-30-5 (NOTL) 108-30-5D )
L1          87 LIPASE AND (108-30-5/RN)

=> S L1 AND RESOLUTION
        103764 RESOLUTION
          1057 RESOLUTIONS
        104341 RESOLUTION
                 (RESOLUTION OR RESOLUTIONS)
        335752 RESOLN
          8002 RESOLNS
        340026 RESOLN
                 (RESOLN OR RESOLNS)
        381145 RESOLUTION
                 (RESOLUTION OR RESOLN)
L2          42 L1 AND RESOLUTION

=> S L2 AND ALCOHOL
        281836 ALCOHOL
        179934 ALCOHOLS
        427140 ALCOHOL
                 (ALCOHOL OR ALCOHOLS)
        607219 ALC
        196162 ALCS
        705208 ALC
                 (ALC OR ALCS)
        878435 ALCOHOL
                 (ALCOHOL OR ALC)
L3          21 L2 AND ALCOHOL

=> D SCAN

L3    21 ANSWERS   CAPLUS  COPYRIGHT 2008 ACS on STN
CC   27-7 (Heterocyclic Compounds (One Hetero Atom))
     Section cross-reference(s): 7
TI   Lipase-mediated kinetic resolution of rigid clofibrate
     analogues with lipid-modifying activity
ST   clofibrate analog enantioselective prepn; chloro hydro benzopyran
     benzofuran deriv enantioselective prepn; kinetic resoln
     benzofuranmethanol benzopyranmethanol enzymic acylation lipase;
     benzofurancarboxylate benzopyrancarboxylate enzymic hydrolysis
     lipase catalyst
IT   Asymmetric synthesis and induction
        (enantioselective preparation of benzofuran and benzopyran derivs. as rigid
        analogs of clofibrate by kinetic resolution with lipase
        )
IT   Carboxylic acids, preparation
     RL: PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic
     preparation); PREP (Preparation); RACT (Reactant or reagent)
        (enantioselective preparation of benzofuran and benzopyran derivs. as rigid
        analogs of clofibrate by kinetic resolution with lipase
        )
IT   Alcohols, preparation
     Esters, preparation
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (enantioselective preparation of benzofuran and benzopyran derivs. as rigid
        analogs of clofibrate by kinetic resolution with lipase
```

)

IT Resolution (separation)
(enzymic, kinetic; enantioselective preparation of benzofuran and benzopyran derivs. as rigid analogs of clofibrate by kinetic resolution with lipase)

IT Hydrolysis
(enzymic, stereoselective; enantioselective preparation of benzofuran and benzopyran derivs. as rigid analogs of clofibrate by kinetic resolution with lipase)

IT Acylation
Acylation catalysts
Hydrolysis catalysts
(stereoselective, enzymic; enantioselective preparation of benzofuran and benzopyran derivs. as rigid analogs of clofibrate by kinetic resolution with lipase)

IT 51-64-9P, (+)-Amphetamine 95485-43-1P 164265-07-0P 164265-08-1P
164265-09-2P 164265-10-5P 164265-13-8P 165333-98-2P 312608-69-8P
357396-15-7P 357396-16-8P 357396-17-9P 357396-18-0P 357396-19-1P
357396-20-4P 357396-21-5P 357396-22-6P 357396-23-7P 357396-24-8P
357396-25-9P 357396-26-0P 357396-27-1P 357396-28-2P 357396-29-3P
357396-31-7P
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(enantioselective preparation of benzofuran and benzopyran derivs. as rigid analogs of clofibrate by kinetic resolution with lipase
)

IT 9001-62-1, Lipase
RL: CAT (Catalyst use); USES (Uses)
(enantioselective preparation of benzofuran and benzopyran derivs. as rigid analogs of clofibrate by kinetic resolution with lipase
)

IT 637-07-0, Clofibrate
RL: NUU (Other use, unclassified); USES (Uses)
(enantioselective preparation of benzofuran and benzopyran derivs. as rigid analogs of clofibrate by kinetic resolution with lipase
)

IT 108-30-5, Succinic anhydride, reactions 40026-24-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(enantioselective preparation of benzofuran and benzopyran derivs. as rigid analogs of clofibrate by kinetic resolution with lipase
)

IT 55169-15-8P 68281-66-3P 312608-29-0P 312608-45-0P 357396-06-6P
357396-07-7P 357396-08-8P 357396-09-9P 357396-10-2P 357396-11-3P
357396-12-4P 357396-13-5P 357396-14-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(enantioselective preparation of benzofuran and benzopyran derivs. as rigid analogs of clofibrate by kinetic resolution with lipase
)

IT 357396-01-1P 357396-04-4P
RL: PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(resolution of a chlorodihydrobenzofurancarboxylic acid by resolution with amphetamine)

IT 156-34-3, (-)-Amphetamine 34385-94-9 312608-59-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(resolution of a chlorodihydrobenzofurancarboxylic acid by resolution with amphetamine)

IT 357396-02-2P 357396-05-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

```
     (Reactant or reagent)
        (resolution of a chlorodihydrobenzofurancarboxylic acid by
        resolution with amphetamine)
IT   63559-46-6P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (resolution of a chlorodihydrobenzofurancarboxylic acid by
        resolution with amphetamine)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> S L3 AND (AY<2004 OR PY<2004 OR PRY<2004)
      4760042 AY<2004
     23975521 PY<2004
      4238557 PRY<2004
L4          11 L3 AND (AY<2004 OR PY<2004 OR PRY<2004)

=> S L4 AND DULOXETINE
           648 DULOXETINE
             2 DULOXETINES
           648 DULOXETINE
                 (DULOXETINE OR DULOXETINES)
L5           0 L4 AND DULOXETINE

=> S L5 AND 164071-56-1/RN
             9 164071-56-1
             0 164071-56-1D
             9 164071-56-1/RN
                 (164071-56-1 (NOTL) 164071-56-1D )
L6           0 L5 AND 164071-56-1/RN

=> S L3 AND 164071-56-1/RN
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             0 164071-56-1D
             9 164071-56-1/RN
                 (164071-56-1 (NOTL) 164071-56-1D )
L7           1 L3 AND 164071-56-1/RN

=> S L1 AND (AY<2004 OR PY<2004 OR PRY<2004)
      4760042 AY<2004
     23975521 PY<2004
      4238557 PRY<2004
L8          62 L1 AND (AY<2004 OR PY<2004 OR PRY<2004)

=> S L7 AND (AY<2004 OR PY<2004 OR PRY<2004)
      4760042 AY<2004
     23975521 PY<2004
      4238557 PRY<2004
L9           0 L7 AND (AY<2004 OR PY<2004 OR PRY<2004)

=> D HIS

     (FILE 'HOME' ENTERED AT 11:27:45 ON 04 FEB 2008)

     FILE 'CAPLUS' ENTERED AT 11:28:05 ON 04 FEB 2008
L1           87 S LIPASE AND (108-30-5/RN)
L2           42 S L1 AND RESOLUTION
L3           21 S L2 AND ALCOHOL
L4           11 S L3 AND (AY<2004 OR PY<2004 OR PRY<2004)
L5            0 S L4 AND DULOXETINE
L6            0 S L5 AND 164071-56-1/RN
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L7            1 S L3 AND 164071-56-1/RN
L8           62 S L1 AND (AY<2004 OR PY<2004 OR PRY<2004)
L9            0 S L7 AND (AY<2004 OR PY<2004 OR PRY<2004)

=> D HIS

     (FILE 'HOME' ENTERED AT 11:27:45 ON 04 FEB 2008)

     FILE 'CAPLUS' ENTERED AT 11:28:05 ON 04 FEB 2008
L1           87 S LIPASE AND (108-30-5/RN)
L2           42 S L1 AND RESOLUTION
L3           21 S L2 AND ALCOHOL
L4           11 S L3 AND (AY<2004 OR PY<2004 OR PRY<2004)
L5            0 S L4 AND DULOXETINE
L6            0 S L5 AND 164071-56-1/RN
L7            1 S L3 AND 164071-56-1/RN
L8           62 S L1 AND (AY<2004 OR PY<2004 OR PRY<2004)
L9            0 S L7 AND (AY<2004 OR PY<2004 OR PRY<2004)

=> D IBIB ABS HITSTR L4

L4   ANSWER 1 OF 11  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:         2005:322469  CAPLUS  Full-text
DOCUMENT NUMBER:          142:354034
TITLE:                    Microbial enzymes for resolution of
                          alcohols and esters
INVENTOR(S):              Watabe, Shinya; Yamada, Shinya; Fujiwara, Mitsuhiko;
                          Sayo, Noboru
PATENT ASSIGNEE(S):       Takasago Perfumery Co., Ltd., Japan
SOURCE:                   Jpn. Kokai Tokkyo Koho, 21 pp.
                          CODEN: JKXXAF
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     JP 2005095155         A     20050414    JP 2004-234705          20040811 <--
PRIORITY APPLN. INFO.:                       JP 2003-313059       A  20030904 <--
AB   The racemic alcs. or esters are incubated with hydrolytic enzymes of
     microorganism in the presence of acid anhydrides or carboxylic acid esters for
     easy and efficient manufacture of half esters with high ratio of specific
     stereo isomers.  Manufacture of (2E,6E)-farnesol from racemic farnesol with
     Lipase PS-C in the presence of succinic anhydride was shown.
IT   108-30-5, Succinic anhydride, biological studies
     RL: BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological
     study); RACT (Reactant or reagent)
        (microbial enzymes for resolution of alcs. and esters)
RN   108-30-5  CAPLUS
CN   2,5-Furandione, dihydro-  (CA INDEX NAME)
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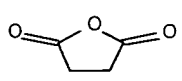


=> D IBIB ABS HITSTR L4 2-11

L4 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:1059496 CAPLUS Full-text
DOCUMENT NUMBER: 142:22349
TITLE: enzymatic acylation of 1,2-diol derivatives and their esters with succinic anhydride
INVENTOR(S): Hwang, Soon Ook; Kim, Do Hoon; Ryu, Hye Youn; Lee, Tae Im; Chung, Sun Ho
PATENT ASSIGNEE(S): Enzytech, Ltd., S. Korea
SOURCE: PCT Int. Appl., 11 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

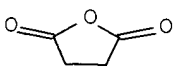
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004106534	A1	20041209	WO 2004-KR1313	20040602 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
KR 2004104066	A	20041210	KR 2003-35470	20030603 <--
US 2006234362	A1	20061019	US 2005-558057	20051122 <--
IN 2005CN03190	A	20070727	IN 2005-CN3190	20051130 <--
PRIORITY APPLN. INFO.:			KR 2003-35470 A	20030603 <--
			WO 2004-KR1313 W	20040602

OTHER SOURCE(S): MARPAT 142:22349

AB The present invention relates to a new process for the preparation of optically active alcs. by lipase acylation of racemic mixts. with succinic anhydride. In more detail, this invention relates to the process for the preparation of optically active alcs. and their esters which are used as pharmaceutical intermediates by reacting the hydroxyl group stereospecifically by lipase after adding racemic alcs. and succinic anhydride as an acylating agent. According to this invention, the primary hydroxyl group of 1,2-diols is transformed by other functional group and the secondary hydroxyl group is esterified stereospecifically with succinic anhydride as an acylating agent. Optically active alcs. and their esters of high optical purity in high yield can be produced by using succinic anhydride as an acylating agent because alcs. can be separated from their esters more easily than those of other conventional methods.

IT 108-30-5, Succinic anhydride, reactions
RL: BCP (Biochemical process); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)
(enzymic acylation of 1,2-diol derivs. and their esters with succinic anhydride)

RN 108-30-5 CAPLUS
CN 2,5-Furandione, dihydro- (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:697565 CAPLUS Full-text
DOCUMENT NUMBER: 136:5711

TITLE: Lipase-Mediated Resolution of 4-TMS-3-butyn-2-ol and Use of the Mesylate Derivatives as a Precursor to a Highly Stereoselective Chiral Allenylindium Reagent

AUTHOR(S): Marshall, James A.; Chobanian, Harry R.; Yanik, Mathew M.
CORPORATE SOURCE: Department of Chemistry, University of Virginia, Charlottesville, VA, 22904, USA

SOURCE: Organic Letters (2001), 3(21), 3369-3372
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:5711

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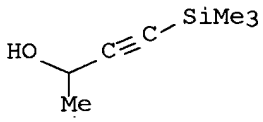

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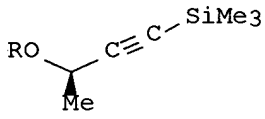

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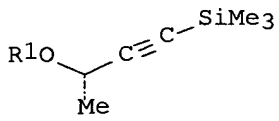

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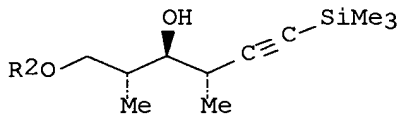

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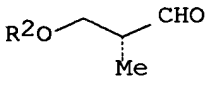


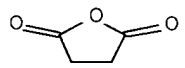
V

AB An improved procedure for the enzymic resolution of 4-trimethylsilyl-3-butyn-2-ol I has been developed; the improved procedure converts the alc. generated in the resolution to a monosuccinate ester, thus decreasing the volatility of the resolved intermediates in the resolution, avoiding a chromatog. step, and increasing the yield of resolved product. E.g., Amano AK Lipase , vinyl acetate, and 4Å mol. sieves were added to a solution of I in pentane; after 72 h, the mixture was filtered, concentrated, and dissolved in THF; succinic anhydride, triethylamine, and DMAP were added and the mixture refluxed for 4 h followed by workup to give (R)-acetate II (R = AcO) in 82% theo. yield along with (S)-succinate III (R1 = HO2CCH2CH2CO) in 86% theo. yield. E.g.,

treatment of II and III sep. with diisobutylaluminum hydride in hexanes gave the nonracemic alcs. II (R = H) and III (R1 = H) in 83% and 87% yields, resp. The mesylates II (R = MeSO2) and III (R1 = MeSO2) of the resolved alcs. undergo highly enantio-, regio-, and diastereoselective addns. to aldehydes with indium (I) iodide in the presence of palladium acetate and triphenylphosphine, to give homopropargylic secondary alc. adducts such as IV [R2 = Me3CSi(Me)2] in 70-89% yields, 94-98% ee, and 20-98% de. E.g., II (R = MeSO2) adds to nonracemic aldehyde (R)-V [R2 = Me3CSi(Me)2] with indium (I) iodide in the presence of palladium acetate and triphenylphosphine to give IV [R2 = Me3CSi(Me)2] as a single isomer in 71% yield and 98% de.

IT 108-30-5, Succinic anhydride, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation and lipase-mediated resolution of 4-(trimethylsilyl)-3-butyn-2-ol and the regio- and stereoselective addition of the mesylates to aldehydes in the presence of indium (I) iodide, palladium acetate, and triphenylphosphine)

RN 108-30-5 CAPLUS
CN 2,5-Furandione, dihydro- (CA INDEX NAME)



REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:420240 CAPLUS Full-text
DOCUMENT NUMBER: 135:210888
TITLE: Lipase-mediated kinetic resolution of rigid clofibrate analogues with lipid-modifying activity
AUTHOR(S): Ferorelli, S.; Franchini, C.; Loiodice, F.; Perrone, M. G.; Scilimati, A.; Sinicropi, M. S.; Tortorella, P.
CORPORATE SOURCE: Dipartimento Farmaco-Chimico, Universita di Bari, Bari, 70125, Italy
SOURCE: Tetrahedron: Asymmetry (2001), 12(6), 853-862
CODEN: TASYE3; ISSN: 0957-4166
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 135:210888
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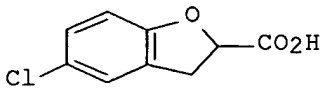

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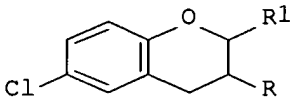
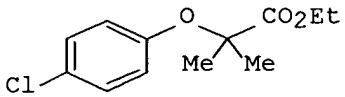


II



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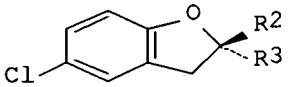


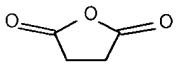
IV

AB The lipase-catalyzed kinetic resolns. of Me esters of dihydrobenzofurancarboxylic acid I and dihydrobenzopyrancarboxylic acids II (R = H, HO2C; R1 = HO2C, H), rigid analogs of the active metabolite of clofibrate III, were effected with fair to moderate enantioselectivities (E=1.0-4.8), enantiomeric excesses of up to 86% and workable reaction rates. Both enzymic acylation of dihydrobenzofuran- and dihydrobenzopyranmethanol derivs. and enzymic hydrolysis of dihydrobenzofurancarboxylate and dihydrobenzopyrancarboxylate Me esters were explored as potential methods for the kinetic resolution of clofibrate analogs. Enantiomerically pure dihydrobenzofurancarboxylic acids IV (R2 = H, HO2C; R3 = HO2C, H) were obtained by fractional crystallization of the diastereomeric salts of the corresponding racemic acid with (+)- and (-)-amphetamine from ethanol; the absolute configuration of the products were established by chemical correlation.

IT 108-30-5, Succinic anhydride, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(enantioselective preparation of benzofuran and benzopyran derivs. as rigid analogs of clofibrate by kinetic resolution with lipase
)

RN 108-30-5 CAPLUS

CN 2,5-Furandione, dihydro- (CA INDEX NAME)



REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:759789 CAPLUS Full-text

DOCUMENT NUMBER: 134:41135

TITLE: Enzymatic resolution of racemic secondary alcohols by lipase B from Candida antarctica

AUTHOR(S): Patel, Ramesh N.; Banerjee, Amit; Nanduri, Venkata; Goswami, Animesh; Comezoglu, F. T.

CORPORATE SOURCE: Department of Enzyme Technology, Process Research, Bristol-Myers Squibb Pharmaceutical Research Institute, New Brunswick, NJ, 08903, USA

SOURCE: Journal of the American Oil Chemists' Society (2000), 77(10), 1015-1019
CODEN: JAOCA7; ISSN: 0003-021X

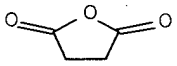
PUBLISHER: AOCS Press

DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 134:41135

AB Chiral intermediates S-(+)-2-pentanol and S-(+)-2-heptanol were prepared by a lipase-catalyzed enzymic resolution process. Among various lipases evaluated for the stereoselective acylation of racemic alcs., lipase B from Candida antarctica catalyzed the acylation of the undesired enantiomer of racemic alcs. leaving the desired S-(+)-alcs. unreacted. A reaction yield of 43-45% and an enantiomeric excess (e.e.) of >99% were obtained for S-(+)-2-pentanol or S-(+)-2-heptanol when the reaction was carried out using vinyl acetate or succinic anhydride as acylating agent. In an alternative process, an enantioselective hydrolysis of 2-pentyl acetate was demonstrated using lipase B giving S-(+)-2-pentyl acetate and R-(-)-2-pentanol. A reaction yield of 45% and an e.e. of 98.6% were obtained for S-(+)-2-pentyl acetate.

IT 108-30-5, Succinic anhydride, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)
(enzymic resolution of racemic secondary alcs. by lipase B from Candida antarctica)

RN 108-30-5 CAPLUS
CN 2,5-Furandione, dihydro- (CA INDEX NAME)



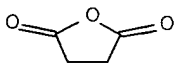
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:182846 CAPLUS Full-text
DOCUMENT NUMBER: 126:225424
TITLE: A kinetic resolution route to the (S)-chromanmethanol intermediate for synthesis of the natural tocols
AUTHOR(S): Hyatt, John A.; Skelton, Chad
CORPORATE SOURCE: Research Laboratories, Eastman Chemical Co., Kingsport, TN, 37662, USA
SOURCE: Tetrahedron: Asymmetry (1997), 8(4), 523-526
CODEN: TASYE3; ISSN: 0957-4166
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 126:225424

AB Kinetic resolution of 2-hydroxymethyl-2,5,7,8-tetramethyl-6- chromanol was carried out by reaction with succinic anhydride catalyzed by Amano PS-30 lipase. The (S)-enantiomer, which corresponds to the natural (2R)-configuration of the natural tocopherols and tocotrienols, was selectively acylated. An enantiomeric excess of 96.5% was achieved, and the absolute configuration was proven by conversion to known tocol intermediates. This work provides an example of the uncommon kinetic resolution of a primary neopentyl-type alc. and provides a high-yield, chromatog.-free route to a useful tocol intermediate.

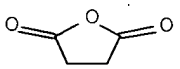
IT 108-30-5, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(kinetic resolution route to the (S)-chromanmethanol intermediate for synthesis of the natural tocols)

RN 108-30-5 CAPLUS
CN 2,5-Furandione, dihydro- (CA INDEX NAME)



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:103505 CAPLUS Full-text
DOCUMENT NUMBER: 126:185626
TITLE: Practical enzymic resolution of racemic alcohols and amines in organic solvents
AUTHOR(S): Gutman, Arie L.; Shkolnik, Eleonora; Meyer, Elazar; Polyak, Felix; Brenner, Dov; Boltanski, Aviv
CORPORATE SOURCE: Department of Chemistry, Israel Institute of Technology, Haifa, 32,000, Israel
SOURCE: Annals of the New York Academy of Sciences (1996), 799(Enzyme Engineering XIII), 620-632
CODEN: ANYAA9; ISSN: 0077-8923
PUBLISHER: New York Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Application of lipase to the enzymic resolution of racemic alcs. and amines in organic solvents is described. E.g., lipase catalyzed the esterification of PhCHMeOH with succinic anhydride to give the (R)-ester and unreacted (S)-PhCHMeOH. E.g., 1-aminoindan was resolved by lipase catalyzed reaction with PrCO2OCH2CF3.
IT 108-30-5, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(enzymic resolution of racemic alcs. and amines in organic solvents)
RN 108-30-5 CAPLUS
CN 2,5-Furandione, dihydro- (CA INDEX NAME)



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:667080 CAPLUS Full-text
DOCUMENT NUMBER: 123:82935
TITLE: Method for purification of alcohols using cyclic anhydrides
INVENTOR(S): Boaz, Neil W.
PATENT ASSIGNEE(S): Eastman Kodak Co., USA
SOURCE: U.S., 15 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5312950	A	19940517	US 1993-114808	19930831 <--
PRIORITY APPLN. INFO.:			US 1993-114808	19930831 <--

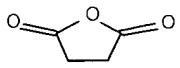
OTHER SOURCE(S): CASREACT 123:82935

AB A method for the purification of alcs. from organic soluble impurities comprises treating the crude alc. with a cyclic anhydride followed by aqueous base, extracting the corresponding half-ester salt into aqueous solution leaving the impurities in organic solution, and removing the half-ester substituent from the water-soluble salt to afford a purified parent alc. This method is particularly useful for the separation of chiral, nonracemic alcs. from the corresponding antipodal ester (the mixture resulting from an enzymic kinetic resolution) because the separation is non-chromatog. and the enantiomeric integrity of the products is maintained. Thus, racemic 1-phenylethanol in MeOCMe3 was stirred 24 h with H2C:CHOAc and SAM-II lipase (derived from Pseudomonas fluorescens) to give an equimolar mixture of (S)-1-phenylethanol and (R)-1-phenylethyl acetate. This in CH2Cl2 was treated with Et3N, 4-dimethylaminopyridine, and succinic anhydride to give a product mixture which was extracted with aqueous NaHCO3. (R)-1-phenylethyl acetate was isolated from the organic phase and the succinate half-ester of (S)-1-phenylethanol was isolated from the aqueous phase by acidification with HCl and extraction with CH2Cl2 and EtOAc. The half ester was deacylated with K2CO3 in MeOH to give (S)-1-phenylethanol of 92% enantiomeric excess. The (R)-1-phenylethyl acetate was similarly deacetylated to give (R)-1-phenylethanol of 90% enantiomeric excess.

IT 108-30-5, Succinic anhydride, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclic anhydrides in enzymic kinetic resolution)

RN 108-30-5 CAPLUS

CN 2,5-Furandione, dihydro- (CA INDEX NAME)



L4 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1994:577857 CAPLUS Full-text

DOCUMENT NUMBER: 121:177857

TITLE: Enzymic process for the stereoselective preparation of a hetero-bicyclic alcohol enantiomer.

INVENTOR(S): Buizer, Nicolaas; Kruse, Chris G.; van der Laan, Melle; Langrand, Georges; van Scharrenburg, Gustaaf J. M.; Snoek, Maria C.

PATENT ASSIGNEE(S): Duphar International Research B.V., Neth.

SOURCE: Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

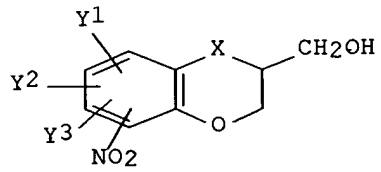
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 605033	A1	19940706	EP 1993-203451	19931209 <--
EP 605033	B1	19990721		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE					
AT 182367	T	19990815	AT 1993-203451	19931209	<--
EP 939135	A1	19990901	EP 1998-204281	19931209	<--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE					
ES 2134241	T3	19991001	ES 1993-203451	19931209	<--
ZA 9309435	A	19940809	ZA 1993-9435	19931215	<--
CA 2111607	A1	19940622	CA 1993-2111607	19931216	<--
FI 9305676	A	19940622	FI 1993-5676	19931216	<--
NO 9304652	A	19940622	NO 1993-4652	19931216	<--
HU 67694	A2	19950428	HU 1993-3619	19931216	<--
HU 213569	B	19970828			
RO 112517	B1	19971030	RO 1993-1714	19931216	<--
CZ 286077	B6	20000112	CZ 1993-2784	19931216	<--
AU 9352502	A	19940630	AU 1993-52502	19931217	<--
AU 674547	B2	19970102			
JP 06237790	A	19940830	JP 1993-343229	19931217	<--
CN 1101378	A	19950412	CN 1993-121130	19931217	<--
CN 1054882	B	20000726			
PL 177831	B1	20000131	PL 1993-301539	19931217	<--
PL 178517	B1	20000531	PL 1993-332294	19931217	<--
TW 381120	B	20000201	TW 1993-82110748	19931218	<--
IL 108090	A	19981030	IL 1993-108090	19931220	<--
RU 2124506	C1	19990110	RU 1993-55675	19931220	<--
CN 1160714	A	19971001	CN 1997-101035	19970122	<--
US 5914263	A	19990622	US 1997-899155	19970723	<--
CZ 286162	B6	20000112	CZ 1997-2905	19970915	<--
CN 1255496	A	20000607	CN 1999-121080	19991006	<--
GR 3031446	T3	20000131	GR 1999-402535	19991007	<--
PRIORITY APPLN. INFO.:			EP 1992-204043 A	19921221	<--
			EP 1993-203451 A3	19931209	<--
			US 1993-167084 A3	19931216	<--

GI



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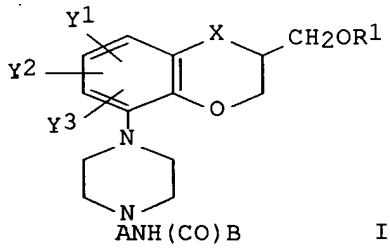


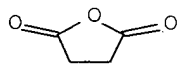
II

AB The invention relates to an enzymic process for the stereoselective preparation of a hetero-bicyclic alc. enantiomer, characterized in that a substantially pure enantiomer (I) (X = O, S, NH, N-(C1-C4) alkyl or CH2; Y1, Y2 and Y3 are each independently hydrogen or substituents selected from halogen, C1-C4 alkyl, C1-C4 alkoxy, C1-C4 haloalkyl, nitro and cyano; the NO2 substituent is attached to the bicyclic ring system in the 5- or 7-position; and the C*-atom has either the R or the S configuration) is prepared from its corresponding alc. racemate by the following successive reactions steps: (1) stereoselective esterification, (2) separation of the alc. from the ester produced, (3) hydrolysis of said ester to produce the corresponding alc. enantiomer, and (4) conversion of said alc. enantiomer into the starting racemate under basic conditions to allow its reuse. The invention also relates to a substantially pure alc. enantiomer I, to the use of said

enantiomer for the preparation of a pharmacol. active piperazine derivative (II; A = straight or branched C2-4 alkylene; B = Ph or heterocyclic group selected from thienyl, pyranyl, furyl, etc.; X and Y are described above) and to substantially pure enantiomeric intermediates.

IT 108-30-5, biological studies
RL: BIOL (Biological study)
(in preparation of heterobicyclic alc. enantiomer by enzymic resolution with lipase)

RN 108-30-5 CAPLUS
CN 2,5-Furandione, dihydro- (CA INDEX NAME)

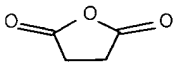


L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1994:8306 CAPLUS Full-text
DOCUMENT NUMBER: 120:8306
TITLE: Convenient practical resolution of racemic alkyl-aryl alcohols via enzymic acylation with succinic anhydride in organic solvents
AUTHOR(S): Gutman, Arie L.; Brenner, Dov; Boltanski, Aviv
CORPORATE SOURCE: Dep. Chem., Technion-Israel Inst. Technol., Haifa, 32000, Israel
SOURCE: Tetrahedron: Asymmetry (1993), 4(5), 839-44
CODEN: TASYE3; ISSN: 0957-4166
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 120:8306

AB Enantiomerically pure alkyl-aryl secondary alcs., e.g., R- and S-PhCH(OH)Me, were conveniently obtained on a Kg. scale from their racemic mixts. by enzymic acylation with succinic anhydride in organic solvents. A major advantage of this acylation method is the ease of separating the ester from the unreacted alc. This is achieved by extracting the organic solution with aqueous NaHCO3 after the enzymic reaction is completed.

IT 108-30-5, Succinic anhydride, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(enzymic acylation by, of alcs., resolution by)

RN 108-30-5 CAPLUS
CN 2,5-Furandione, dihydro- (CA INDEX NAME)



L4 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1990:550895 CAPLUS Full-text
DOCUMENT NUMBER: 113:150895
TITLE: Enzymic manufacture of optically active alcohols
INVENTOR(S): Nishio, Toshiyuki; Seto, Kazumaro; Ohashi, Masayo; Achinami, Kazuo; Terao, Yoshiyasu; Tsuji, Keiichiro
PATENT ASSIGNEE(S): Sapporo Breweries Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

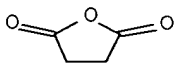
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02142495	A	19900531	JP 1988-293571	19881122 <--

PRIORITY APPLN. INFO.: JP 1988-293571 19881122 <--
OTHER SOURCE(S): MARPAT 113:150895

AB Optical resolution of racemic R1R2R3COH [R1-3 = H, halo, (halo- or amino-substituted) C1-20 aliphatic, aromatic hydrocarbon] using a stereoselective esterase are disclosed. (R,S)-1-Phenylethanol [(R,S)-I] and succinic anhydride in Et2O were treated with Lipase B at 25° for 4 h (.apprx.50% conversion), the filtrate of the reaction mixture was mixed with aqueous Na2CO3, and the mixture was left to sep. them into an organic layer and an aqueous layer. I monoester Na salt in the aqueous layer was stirred with NaOH to give 96% (R)-I (96% ee), while unreacted (S)-I was isolated from the organic layer in 98% yield (94% ee).

IT 108-30-5, biological studies
RL: BIOL (Biological study)
(in optically active alcs. manufacture with lipase, from racemic alcs.)
RN 108-30-5 CAPLUS
CN 2,5-Furandione, dihydro- (CA INDEX NAME)



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FULL ESTIMATED COST	110.79	111.00

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-8.80	-8.80

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